The Grantor's Project Manager is: Gail Seymour, CA Dept of Fish and Game, Bay Delta Region, P.O. Box 47, Yountville, CA 94599, (707) 944-5579; fax (707) 944-5563; email: gseymour@dfg.ca.gov

The Grantee's Project Manager is: Lisa Hulette, Gold Ridge Resource Conservation District, P.O. Box 1064, Occidental, CA 95465, (707) 874-2907; fax: (707) 874-9607, email: lisa@goldridgercd.org

Grant Term: June 2010 – March 2012

EXHIBIT A
Save Our Salmon (SOS) – Salmon Creek
Instream Habitat Enhancement Program (Tannery Creek)
SCOPE OF WORK

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

I. Goals Statement

This project will increase shelter, instream habitat complexity and channel diversity by installing or enhancing five large woody debris (LWD) structures for the benefit of coho salmon and steelhead trout in selected reaches of Tannery Creek, tributary to Salmon Creek in Sonoma County.

II. Objectives Statement

The objective is to increase the cover in two existing pools and one new pool that will be developed as a result of this project by adding large wood to at least double the shelter rating; to increase the residual depth of the pools by an average of six inches, and create high flow refugia in two reaches by adding spider log structures in the channel along the banks. Additionally, the project will stabilize the toe 20 feet of eroding bank by installing boulders along the toe with several rootwads interspersed within the boulders to provide shelter value.

III. Location Description

Conduct work on Tannery Creek approximately 1,000 feet upstream from the confluence of Salmon Creek. The project is located in Township 6N, Range R10W, Section Bodega of the Bodega 7.5 Minute U.S.G.S. Quadrangle, 38.358028 N, 122.999986 W as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

IV. Quantitative Description

Habitat improvements will be accomplished by constructing 13 instream structures as follows: two cover logs, three spider logs, and six rootwads. At one site where the stream bank is vulnerable to erosion, place 20 tons of rock armor. Exhibits D and E describe the instream treatment and are attached and made a part of this agreement by this reference.

SCOPE OF WORK

1. This project will increase shelter, instream habitat complexity and channel diversity by installing or enhancing five large woody debris (LWD) structures in Tannery Creek, tributary to Salmon Creek.

    a. Site 1: A small LWD structure was constructed five years ago at this site. The structure has created pool and cover habitat. In order to create deeper pool habitat, two large redwood logs will placed and anchored in the channel.

    b. Site 2: The stream channel is wide with a long riffle with a shallow glide on the left bank. In order to create high flow refugia and winter rearing habitat, a spider log structure will be installed along the left bank and several root wads will be placed on the right bank gravel bar.

    c. Site 3: The stream channel splits with the primary thalwag flowing along the right bank. Twenty feet of the right bak is vertical and eroding into the stream. In order to provide armor along the bank and to prevent the toe from continuing to erode, several boulders wil be placed along the left bank. Several root wads will be placed in the channel for increased shelter value.

    d. Site 4: A shallow pool has been created by redwood logs in the channel. In order to increase pool depth and provide shelter, the existing logs will be repositioned.

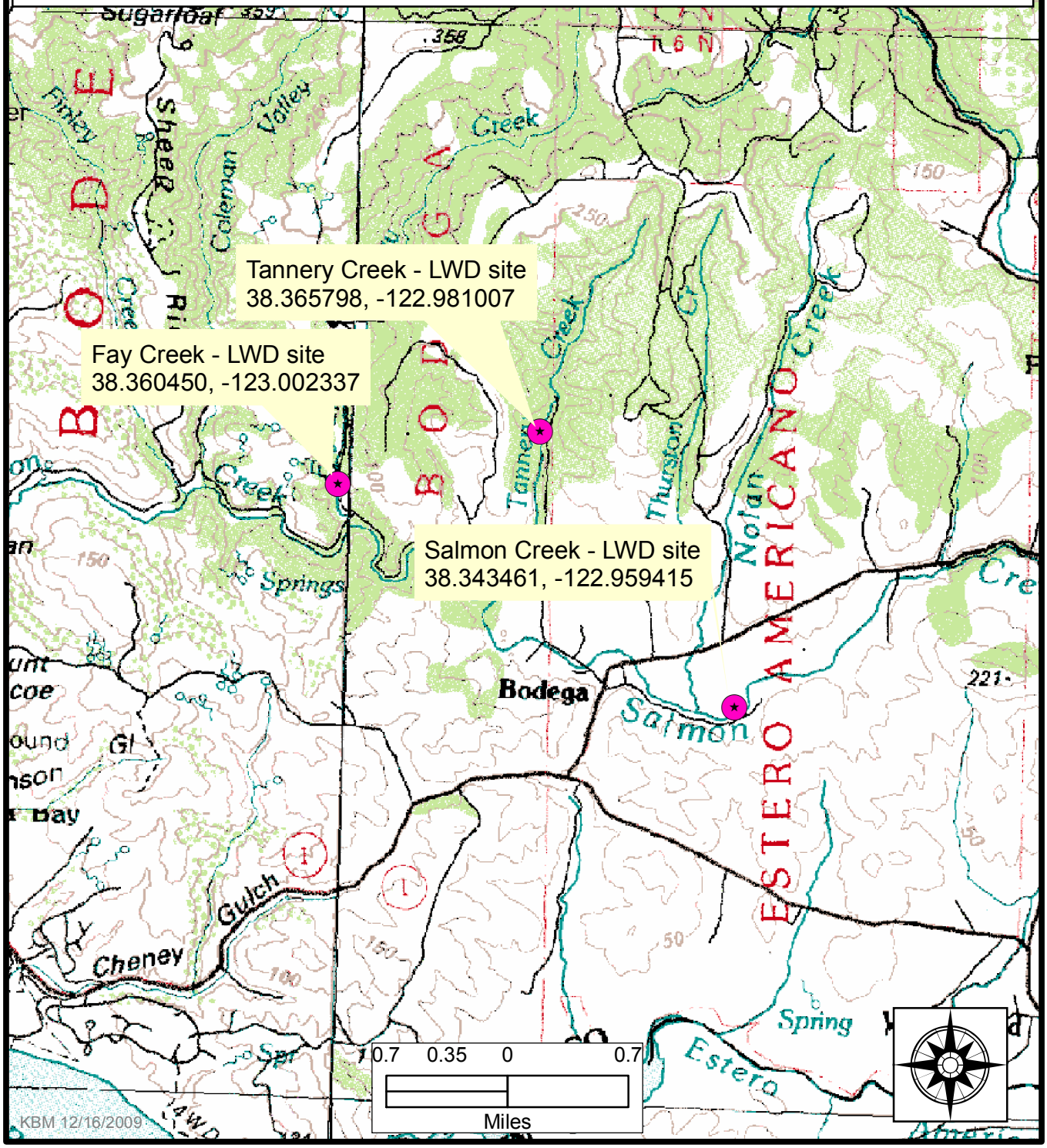
    e. Site 5: This site is lacking in adequate LWD to create pool cover habitat. The length of this site is 180'. In order to provide high flow refugia and winter rearing habitat, two spider log structures will be installed.

2. All habitat improvements will follow techniques described in the latest edition

of the DFG California Salmonid Stream Habitat Restoration Manual, Flosi et al.

3. The Grantee shall notify the DFG Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for DFG personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
    - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
    - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
    - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
    - The Grantee will provide fish relocation data to the DFG Grant Manager on a form provided by the DFG, unless the relocation work is performed by DFG personnel.
    - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the California Salmonid Stream Habitat Restoration Manual.

Exhibit C
Save Our Salmon (SOS) - Salmon Creek Instream Habitat Enhancement Program
Project Location Map
T6N, R10W, Valley Ford and Bodega Head Quads
Sonoma County

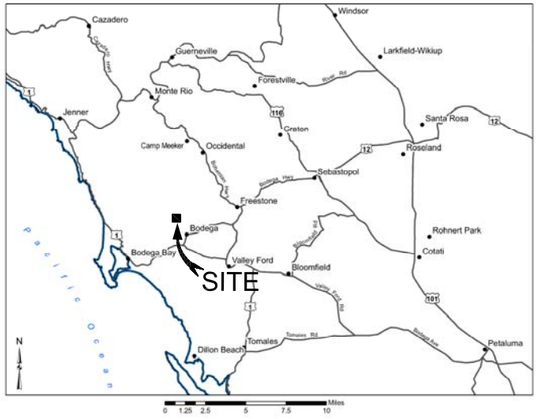


SAVE OUR SALMON:

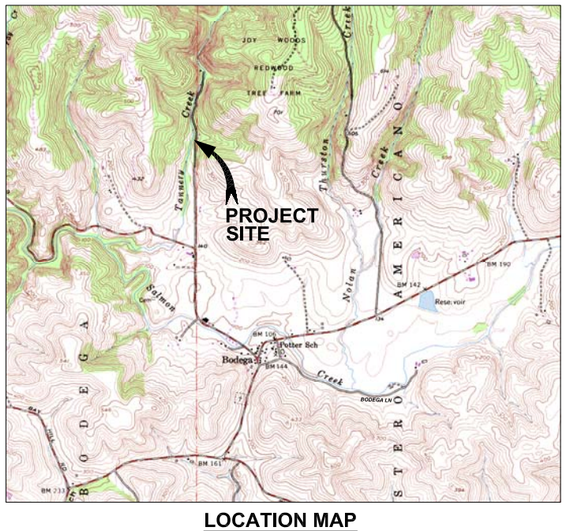
SALMON CREEK INSTREAM HABITAT ENHANCEMENT PROJECT

TANNERY CREEK LARGE WOOD STRUCTURES

CONCEPTUAL PLANS FOR ECOLOGICAL PERMITTING



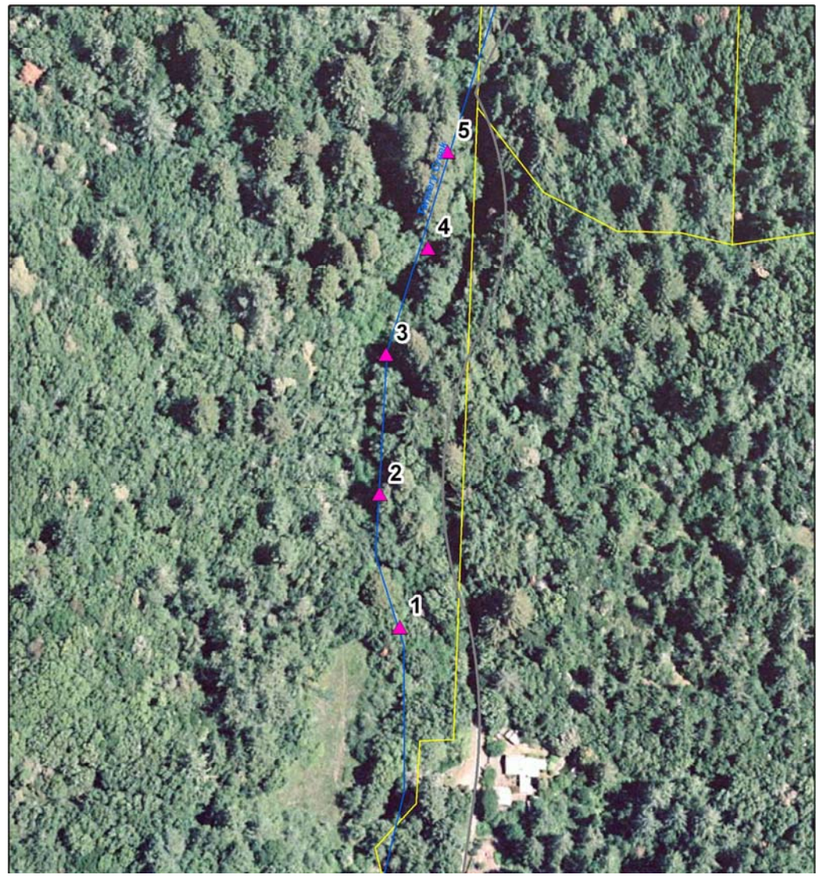
VICINITY MAP



LOCATION MAP
SCALE: 1" = 1000'

SHEET INDEX

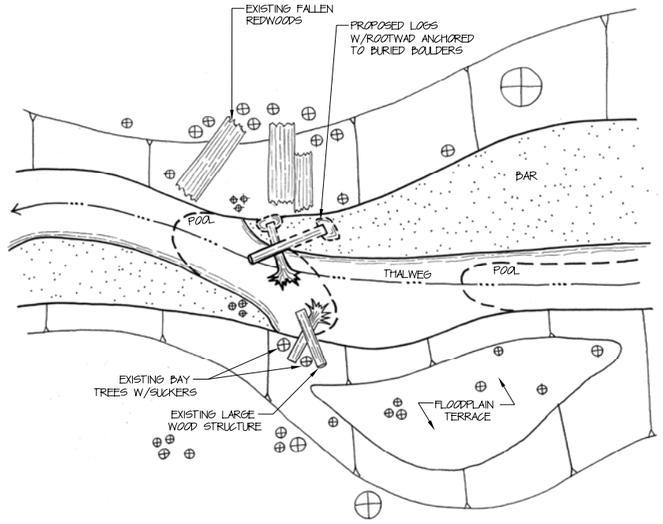
SHEET NO.	TITLE
1	TITLE SHEET
2	LARGE WOOD STRUCTURES CONCEPTUAL PLAN



LAYOUT
1" = 100'

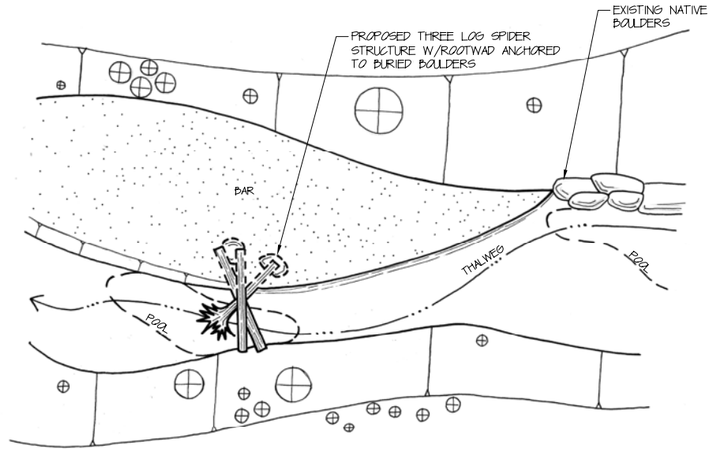
NOTE:
DRAWING SCALE HAS BEEN REDUCED
FROM ITS ORIGINAL SIZE.

DATE: 09-02-09 SCALE: AS SHOWN DESIGNED BY: DG DRAFTED BY: MY CHECKED BY: DG	REVISIONS	DATE	BY	PREPARED FOR: **GOLD RIDGE RESOURCE CONSERVATION DISTRICT** **P.O. BOX 1064** **OCCIDENTAL, CA 95465**	**SAVE OUR SALMON:** **SALMON CREEK INSTREAM HABITAT ENHANCEMENT PROJECT** **TANNERY CREEK LARGE WOOD STRUCTURES** **TITLE SHEET**	SHEET 1 OF 2



SITE 1

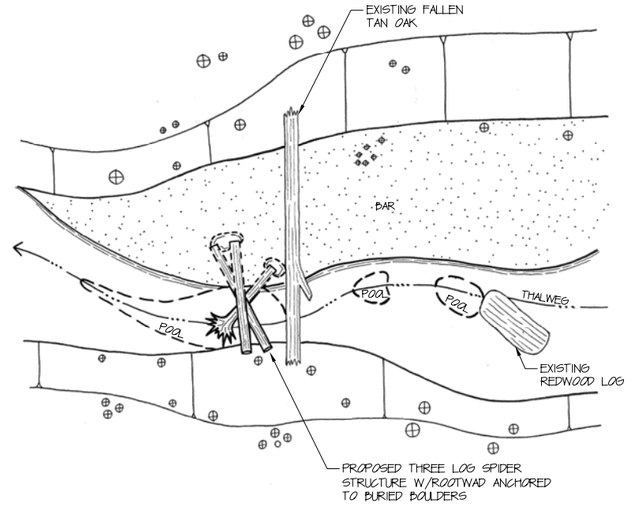
GOAL: NEW STRUCTURE TO ENHANCE FUNCTION OF EXISTING STRUCTURE TO FOCUS FLOWS, SCOUR DEEPER POOL AND INCREASE COVER



SITE 2

GOAL: NEW STRUCTURE TO INCREASE SIZE AND EXTENT OF POOL AND INCREASE COVER

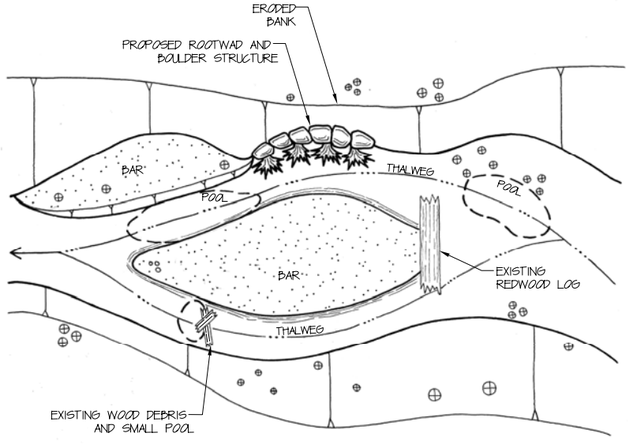
.



SITE 3

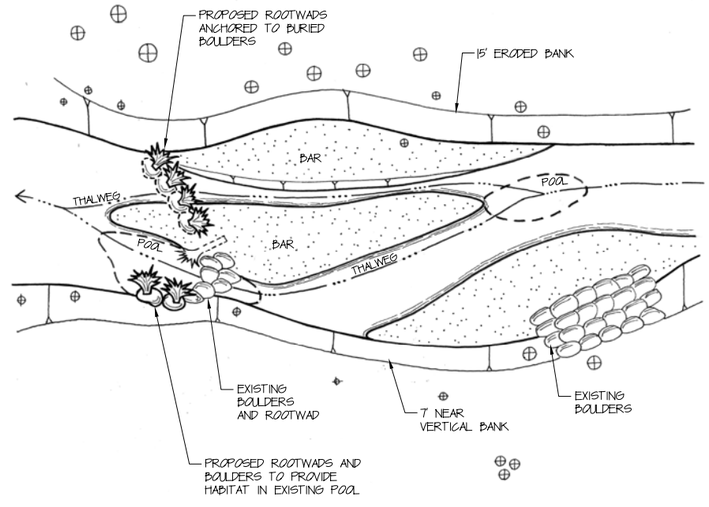
GOAL: NEW STRUCTURE TO INCREASE SIZE AND EXTENT OF POOL AND INCREASE COVER

.



SITE 4

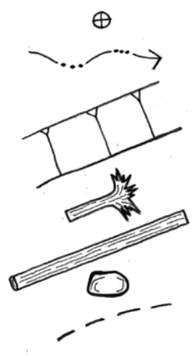
GOAL: NEW STRUCTURE TO PROTECT VERTICAL BANK AND ENHANCE THALWEG SCOUR



SITE 5

GOAL: NEW STRUCTURE TO FOCUS FLOWS, ENHANCE POOL AND INCREASE COVER

LEGEND



- EXISTING TREE
- STREAM THALWEG
- STREAM BANK
- ROOTWAD WITH TRUNK
- LOG
- BOULDER
- POOL EDGE

NOTE:
DRAWING SCALE HAS BEEN REDUCED
FROM ITS ORIGINAL SIZE.

DATE: 09-02-09
SCALE: NTS
DESIGNED BY: DG
DRAFTED BY: MY
CHECKED BY: DG

REVISIONS	DATE	BY

PREPARED FOR:
GOLD RIDGE RESOURCE CONSERVATION DISTRICT
P.O. BOX 1064
OCCIDENTAL, CA 95465

SAVE OUR SALMON:
SALMON CREEK INSTREAM HABITAT ENHANCEMENT PROJECT
TANNERY CREEK LARGE WOOD STRUCTURES
CONCEPTUAL PLANS FOR PERMITTING

SHEET 2 OF 2

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723319_007_HI_Save Our Salmon (SOS) - Salmon Creek Instream Habitat Enhancement Program
T6N, R10W

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	American badger *Taxidea taxus*	AMAJF04010			G5	S4	SC
2	Baker's goldfields *Lasthenia californica ssp. bakeri*	PDAST5L0C4			G3TH	SH	1B.2
3	Baker's navarretia *Navarretia leucocephala ssp. bakeri*	PDPLM0C0E1			G4T2	S2.1	1B.1
4	Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	IIHYM35030			G2	S2	
5	Burke's goldfields *Lasthenia burkei*	PDAST5L010	Endangered	Endangered	G1	S1.1	1B.1
6	California beaked-rush *Rhynchospora californica*	PMCYP0N060			G1	S1.1	1B.1
7	California freshwater shrimp *Syncaris pacifica*	ICMAL27010	Endangered	Endangered	G1	S1	
8	California linderiella *Linderiella occidentalis*	ICBRA06010			G3	S2S3	
9	California tiger salamander *Ambystoma californiense*	AAAAA01180	Threatened	unknown code...	G2G3	S2S3	SC
10	Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
11	Northern Hardpan Vernal Pool	CTT44110CA			G3	S3.1	
12	Northern Vernal Pool	CTT44100CA			G2	S2.1	
13	Pitkin Marsh Indian paintbrush *Castilleja uliginosa*	PDSCR0D380		Endangered	GXQ	SX	1A
14	Pitkin Marsh lily *Lilium pardalinum ssp. pitkinense*	PMLIL1A0H3	Endangered	Endangered	G5T1	S1.1	1B.1
15	Rincon Ridge ceanothus *Ceanothus confusus*	PDRHA04220			G2	S2.2	1B.1
16	Rincon Ridge manzanita *Arctostaphylos stanfordiana ssp. decumbens*	PDERI041G4			G3T1	S1.1	1B.1
17	Sebastopol meadowfoam *Limnanthes vinculans*	PDLIM02090	Endangered	Endangered	G2	S2.1	1B.1
18	Sonoma alopecurus *Alopecurus aequalis var. sonomensis*	PMPOA07012	Endangered		G5T1Q	S1.1	1B.1
19	Sonoma spineflower *Chorizanthe valida*	PDPGN040V0	Endangered	Endangered	G1	S1.1	1B.1
20	Sonoma sunshine *Blennosperma bakeri*	PDAST1A010	Endangered	Endangered	G1	S1.2	1B.1
21	Thurber's reed grass *Calamagrostis crassiglumis*	PMPOA17070			G3Q	S1.2	2.1
22	Vine Hill ceanothus *Ceanothus foliosus var. vineatus*	PDRHA040D6			G3T1	S1?	1B.1
23	Vine Hill clarkia *Clarkia imbricata*	PDONA050K0	Endangered	Endangered	G1	S1.1	1B.1
24	Vine Hill manzanita *Arctostaphylos densiflora*	PDERI040C0		Endangered	G1	S1.1	1B.1

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
25	brownish beaked-rush *Rhynchospora capitellata*	PMCYP0N080			G5	S2S3	2.2
26	dwarf downingia *Downingia pusilla*	PDCAM060C0			G3	S3.1	2.2
27	golden larkspur *Delphinium luteum*	PDRAN0B0Z0	Endangered	Rare	G1	S1.1	1B.1
28	hoary bat *Lasiurus cinereus*	AMACC05030			G5	S4?	
29	legenere *Legenere limosa*	PDCAM0C010			G2	S2.2	1B.1
30	marbled murrelet *Brachyramphus marmoratus*	ABNNN06010	Threatened	Endangered	G3G4	S1	
31	marsh microseris *Microseris paludosa*	PDAST6E0D0			G2	S2.2	1B.2
32	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
33	oval-leaved viburnum *Viburnum ellipticum*	PDCPR07080			G5	S2.3	2.3
34	pallid bat *Antrozous pallidus*	AMACC10010			G5	S3	SC
35	round-headed beaked-rush *Rhynchospora globularis var. globularis*	PMCYP0N0W1			G5T5?	S1	2.1
36	saline clover *Trifolium depauperatum var. hydrophilum*	PDFAB400R5			G5T2?	S2.2?	1B.2
37	seaside tarplant *Hemizonia congesta ssp. congesta*	PDAST4R065			G5T2T3	S2S3	1B.2
38	showy rancheria clover *Trifolium amoenum*	PDFAB40040	Endangered		G1	S1.1	1B.1
39	swamp harebell *Campanula californica*	PDCAM02060			G3	S3	1B.2
40	thin-lobed horkelia *Horkelia tenuiloba*	PDROS0W0E0			G2	S2.2	1B.2
41	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC
42	white beaked-rush *Rhynchospora alba*	PMCYP0N010			G5	S2	2.2
43	white sedge *Carex albida*	PMCYP030D0	Endangered	Endangered	G1	S1.1	1B.1

EXHIBIT A
Salmon Creek Roads Implementation Project
Statement of Work

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

1. Reduce sediment contributions to Salmon Creek by implementing 32 road upgrades and resulting in a savings of 4,050 cubic yards of sediment.

2. Work will be conducted in the Nolan watershed which is a tributary to Salmon Creek which drains 34.5 square miles of land into a tidal estuary just north of Bodega Harbor along the Sonoma Coast. Salmon Creek is located in several sections of Township 6 North and Range 10 West of the Camp Meeker and Valley Ford 7.5 Minute U.S.G.S. Quadrangles, as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

3. The following includes all road drainage, decommissioning and road to trail conversion treatments for this project:

   Upgrade, convert or decommission 2.89 miles of road thereby saving 4,050 cubic yards of sediment from delivery to Nolan Creek and ultimately to Salmon Creek. The Grantee shall upgrade 41 sites as necessary to disperse road runoff and decrease sedimentation.

   <u>Stream-crossing treatments:</u>

   - Install a culvert at 3 unculverted fills (site #42, 43, 44).
   - Replace 14 undersized or damaged culverts at sites # 32, 40, 41, 45, 46, 47, 48, 51, 52, 53, 55, 56, 62, 63.
   - Install 2 trashracks at culvert inlets to prevent plugging.
   - Install 10 critical dips to prevent stream diversions at sites Site #32, 43, 44, 46, 47, 51, 52, 53, 55, 56).
   - At 4 sites, add a total of 84 cubic yards of rock armor on inboard and outboard stream crossing fillslopes, ditches, headcuts, and stream banks.
   - At 9 sites, excavate, remove and store in a stable location a total of 229 cubic yards of sediment, primarily at fillslopes and stream crossings.

   <u>Road Treatments:</u>

   - Install or replace ditch relief culverts at 61 locations to improve road surface drainage.
   - Install downspouts on 2 ditch relief culvert to prevent erosion at culvert outlets.

- Install 91 rolling dips to improve road drainage.
- At 5 locations, outslope road and remove ditch for a total of 1,715 ft of road to improve road surface drainage.
- At 22 locations, outslope road and retain ditch for a total of 9,639 ft of road to improve road surface drainage.
- At 4 locations, clean or cut ditch for a total of 2,508 ft.
- Use a total of 593 cubic yards of road rock to rock the road surface at 3 stream culvert installations, 1 rolling dip, 800 ft of outslope and remove ditch, 3,642 ft of outslope and retain ditch, and 3 other site-specific locations.

4. The following treatments will be implemented where appropriate:

- Upgrading stream crossings installing culverts sized for the 100-year flood flow, including sufficient capacity for expected wood and sediment; eliminate diversion potential by installing a critical dip; replacing culverted fills with hardened fords or armored fills, etc
- Excavation of unstable or potential unstable sidecast materials that could otherwise fail and deliver sediment to a stream
- Dispersion of road runoff and disconnecting road surface runoff from streams, including but not limited to, berm removal, road surface shaping and installation of ditch relief culverts
- Seed and mulch all exposed soils which may deliver sediment to a stream. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years

5. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

6. The Grantee shall notify the DFG Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for DFG personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
   - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
   - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
   - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.

- The Grantee will provide fish relocation data to the DFG Grant Manager on a form provided by the DFG, unless the relocation work is performed by DFG personnel.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the California Salmonid Stream Habitat Restoration Manual.
- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual.*

7. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the California Salmonid Stream Habitat Restoration Manual, Flosi et al. and the California Salmonid Stream Restoration Manual, Third Edition, Volume II, Part XI, January 2004.

8. Annually and upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, *Microsoft Word* compatible, copy on a CD. If the project is not completed in the current year, the Grantee will submit a summary of the completed portion no later than **November 1** and again each year until completed. The report shall include, but not necessarily be limited to the following information:
   - Grant number
   - Project name
   - Geographic area (e.g., watershed name)
   - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
   - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
   - Project start and end dates and the number of person hours expended
   - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
   - Expected benefits to anadromous salmonids from the project
   - Labeled before and after photographs of any restoration activities and techniques
   - Specific project access using public and private roads and trails, with landowner name and address
   - Complete as built road log including sediment savings per site
   - Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HI, HR, HS)
(Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

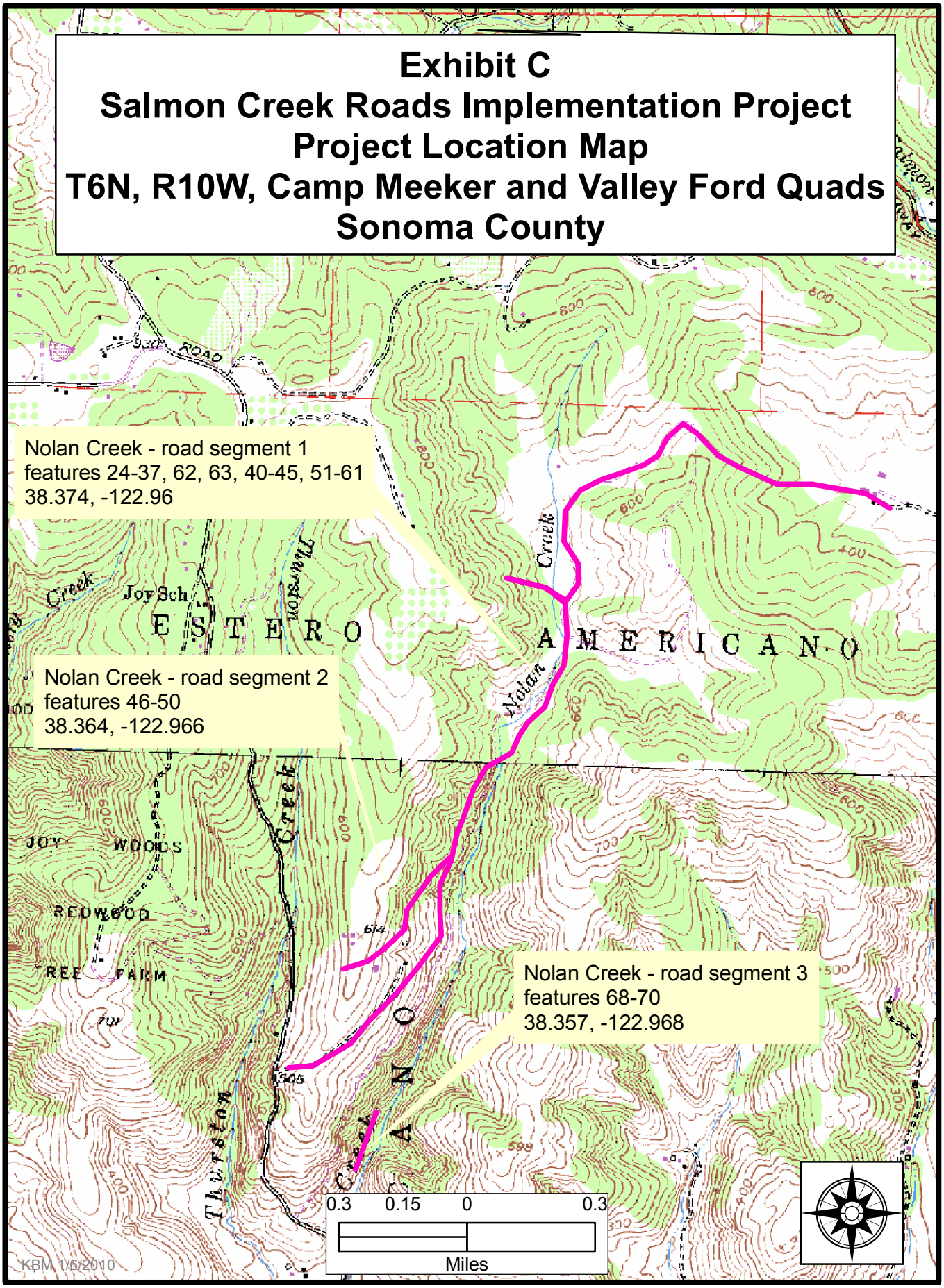
- Number of actions (road decommission / upgrade)
- Number of acres treated.
- Number of miles of road decommissioned or upgraded (e.g., treated).
- Number of cubic yards of sediment saved from entering the steam per site.

Water Quality Projects

- Water quality limitations addressed by the project (e.g. 303(d), TMDL)

9. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the *Salmon Creek Roads Implementation Project.*

Exhibit C
Salmon Creek Roads Implementation Project
Project Location Map
T6N, R10W, Camp Meeker and Valley Ford Quads
Sonoma County



California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723343_031_HU_Salmon Creek Roads Implementation Project
T6N, R10W

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	American badger *Taxidea taxus*	AMAJF04010			G5	S4	SC
2	Baker's larkspur *Delphinium bakeri*	PDRAN0B050	Endangered	Endangered	G1	S1.1	1B.1
3	California red-legged frog *Rana draytonii*	AAABH01022	Threatened		G4T2T3	S2S3	SC
4	Franciscan thistle *Cirsium andrewsii*	PDAST2E050			G2	S2.2	1B.2
5	Marin hesperian *Vespericola marinensis*	IMGASA4140			G2G3	S2S3	
6	Mason's ceanothus *Ceanothus masonii*	PDRHA04200		Rare	G1	S1.3	1B.2
7	Northern Vernal Pool	CTT44100CA			G2	S2.1	
8	Tomales roach *Lavinia symmetricus ssp. 2*	AFCJB19022			G5T2T3	S2S3	SC
9	bent-flowered fiddleneck *Amsinckia lunaris*	PDBOR01070			G2	S2.2	1B.2
10	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
11	fragrant fritillary *Fritillaria liliacea*	PMLIL0V0C0			G2	S2.2	1B.2
12	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
13	seaside tarplant *Hemizonia congesta ssp. congesta*	PDAST4R065			G5T2T3	S2S3	1B.2
14	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC
15	woolly-headed gilia *Gilia capitata ssp. tomentosa*	PDPLM040B9			G5T1	S1.1	1B.1

EXHIBIT A
Green Valley Creek Roads Implementation Project
Statement of Work

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

1. Reduce sediment contributions to Green Valley Creek by implementing 32 road upgrades and resulting in a savings of 4,845 cubic yards of sediment.

2. Work will be conducted in the Green Valley Creek Watershed, which drains into the Russian River before flowing into the Pacific Ocean. The project location is located in Townships 7N and 8N, Range 9W and 10W, of the Camp Meeker 7.5 Minute U.S.G.S. Quadrangle, as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

3. The following includes all road drainage, decommissioning and road to trail conversion treatments for this project:

   Upgrade, convert or decommission 4.0 miles of road thereby saving 4,845 cubic yards of sediment from delivery to Green Valley Creek. The Grantee shall upgrade, convert to trail or decommission 32 sites as necessary to disperse road runoff and decrease sedimentation.

   Stream-crossing treatments:
   Install 2 culverts at an unculverted fill (site #3, 6).
   Replace 3 undersized or damaged culverts (site #2, 18, 100).
   Install 2 rocked ford crossings (Site #33, 51) and 6 armored fill crossings (Site #13, 14, 47, 48, 49, 91) using 118 yd3 of rock armor.
   Install 5 critical dips to prevent stream diversions.
   At 9 sites, add a total of 69 yd 3 of rock armor on inboard and outboard stream crossing fillslopes, ditches, headcuts and stream banks.
   At 21 sites, excavate and remove a total of 1,916 yd3 of sediment, primarily at fillslopes and stream crossings.
   Implement 4 miscellaneous treatments at sites 47, 50, 52 and 54.

   Road Treatments:
   Install or replace 2 ditch relief culverts
   Install 2 downspouts to ditch relief culverts
   Install 23 cross road drains
   Install 69 rolling dips
   At 9 locations outslope road and remove ditch for a total of 3,740 ft of road
   At 2 locations outslope road and retain ditch for a total of 580 ft of road
   At 1 location, inslope road for a total of 80 ft to improve road surface drainage
   At 18 locations, use a total of 277 yd3 of road rock to rock the road surface at 1

stream culvert installation, 2 DRC installations, 5 rolling dips, 100 ft of outslope and retain ditch, 6 armored fills and 3 other site-specific locations.

Approximately 1,916 cubic yards of fill slope and stream crossing fill from stream crossings and landing/slide/fillslope sites will be excavated and stored in stable locations. The following treatments will be implemented where appropriate:

- Complete excavation of stream crossing fills, including 100 year flood channel bottom widths and 2:1 or otherwise stable side slopes
- Excavation of unstable or potential unstable sidecast materials that could otherwise fail and deliver sediment to a stream
- Road surface treatments (ripping, outsloping and/or cross draining) to disperse and reduce surface runoff
- Seeding and mulching of all exposed soils which may deliver sediment to a stream. Woody debris will be concentrated on finished slopes adjacent to stream crossings. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years.

4. The following treatments will be implemented where appropriate:
    - Upgrading stream crossings installing culverts sized for the 100-year flood flow, including sufficient capacity for expected wood and sediment; eliminate diversion potential by installing a critical dip; replacing culverted fills with hardened fords or armored fills, etc
    - Excavation of unstable fill slopes
    - Dispersion of road runoff and disconnecting road surface runoff from streams, including but not limited to, berm removal, road surface shaping and installation of ditch relief culverts
    - Seed and mulch all exposed soils which may deliver sediment to a stream. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years

5. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

6. The Grantee shall notify the DFG Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for DFG personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
    - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.

- The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
- The Grantee will provide fish relocation data to the DFG Grant Manager on a form provided by the DFG, unless the relocation work is performed by DFG personnel.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the California Salmonid Stream Habitat Restoration Manual.
- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

7. All habitat improvements will follow techniques described in the Third Edition, January 1998, of the California Salmonid Stream Habitat Restoration Manual, Flosi et al. and the California Salmonid Stream Restoration Manual, Third Edition, Volume II, Part XI, January 2004.

8. Annually and upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, *Microsoft Word* compatible, copy on a CD. If the project is not completed in the current year, the Grantee will submit a summary of the completed portion no later than **November 1** and again each year until completed. The report shall include, but not necessarily be limited to the following information:
   - Grant number
   - Project name
   - Geographic area (e.g., watershed name)
   - Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
   - Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
   - Project start and end dates and the number of person hours expended
   - Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
   - Expected benefits to anadromous salmonids from the project
   - Labeled before and after photographs of any restoration activities and techniques

- Specific project access using public and private roads and trails, with landowner name and address
- Complete as built road log including sediment savings per site
- Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HI, HR, HS) (Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
    - Design spec achieved
    - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Upland Habitat Projects (HU)

- Number of actions (road decommission / upgrade)
- Number of acres treated.
- Number of miles of road decommissioned or upgraded (e.g., treated).
- Number of cubic yards of sediment saved from entering the steam per site.

Water Quality Projects

- Water quality limitations addressed by the project (e.g. 303(d), TMDL)

9. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the *Green Valley Creek Roads Implementation Project*

Exhibit C
Green Valley Creek Roads Implementation Project
Project Location Map 1
T8N, R10W, Camp Meeker Quad
Sonoma County

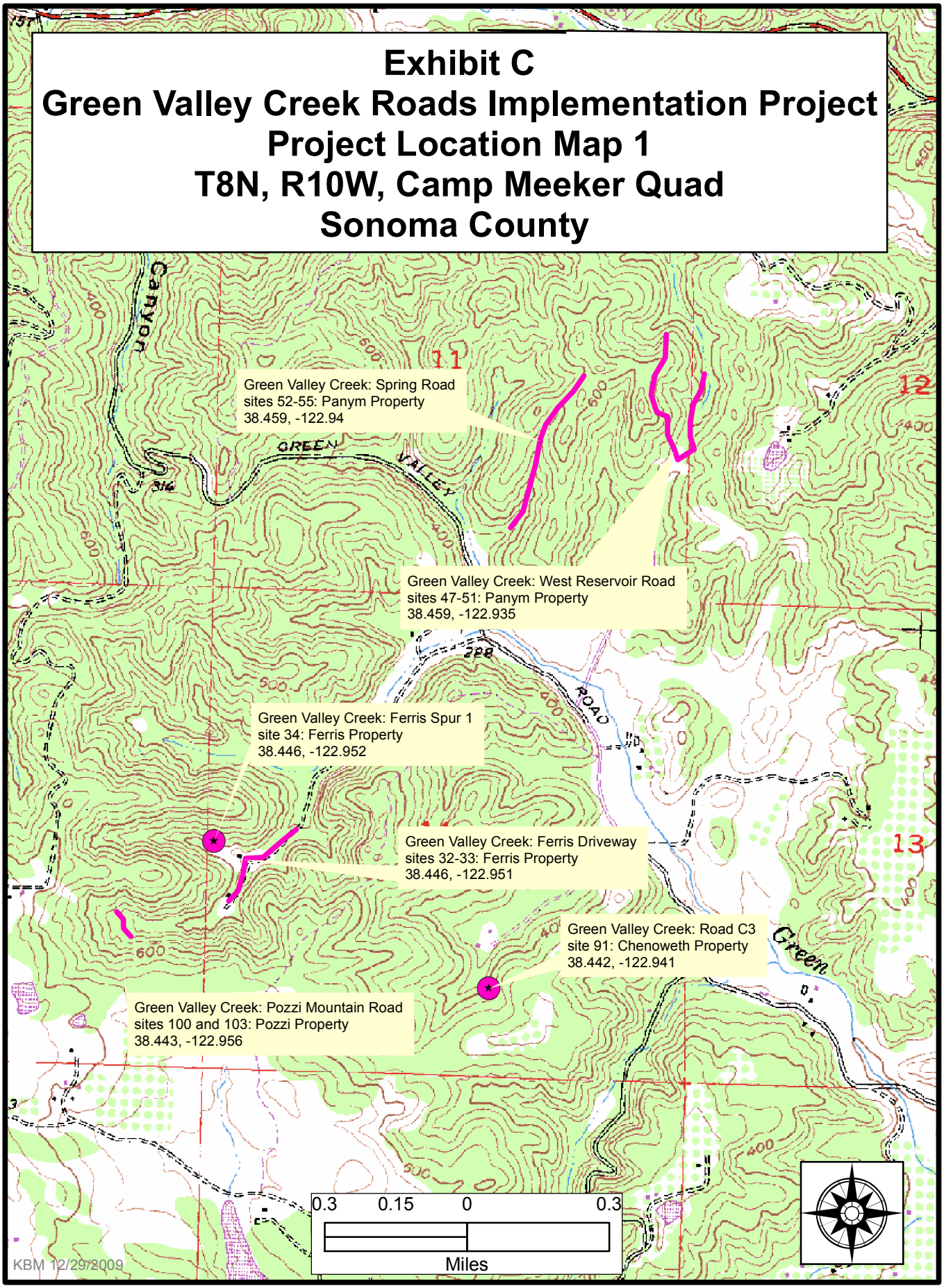
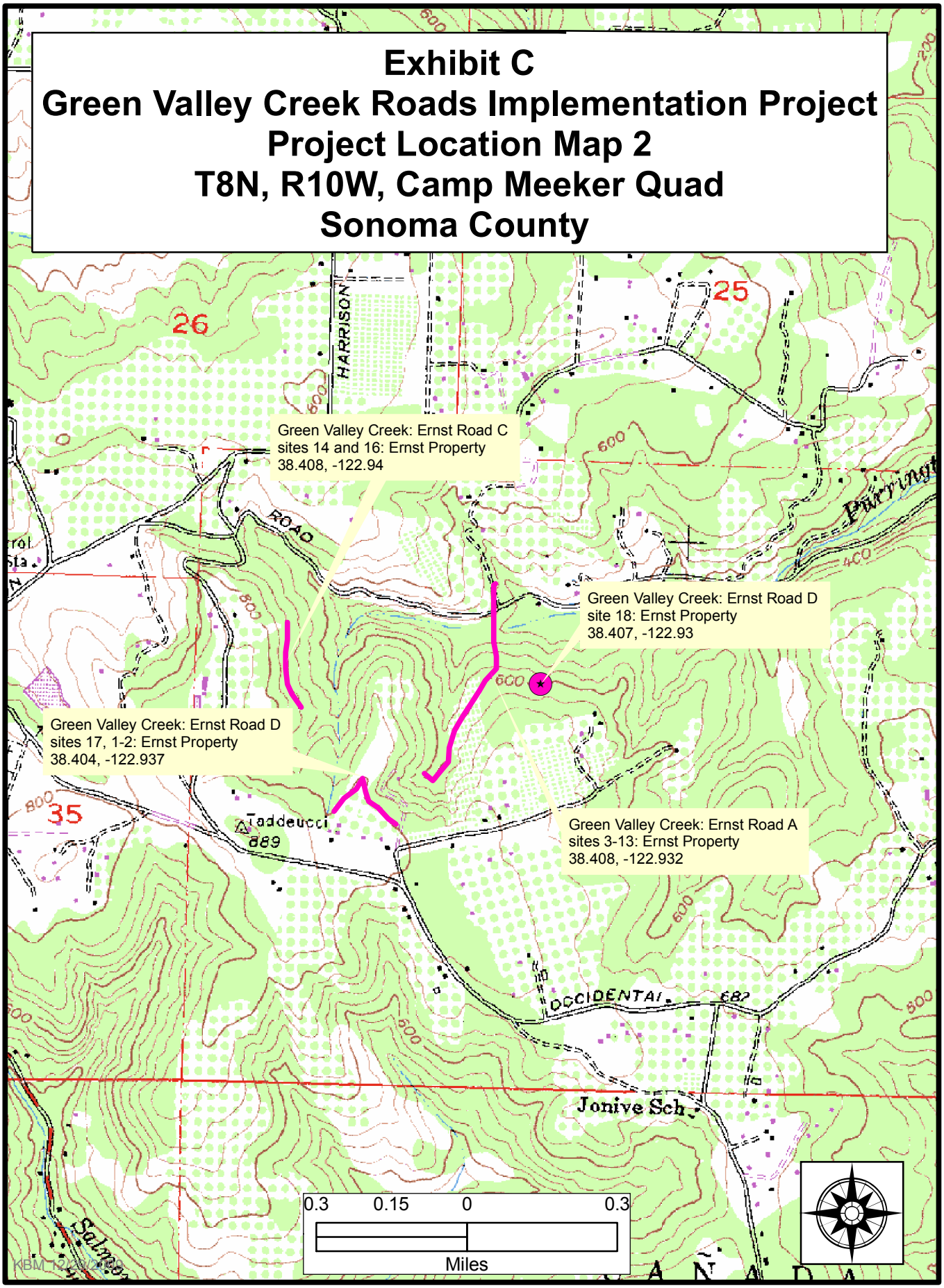


Exhibit C
Green Valley Creek Roads Implementation Project
Project Location Map 2
T8N, R10W, Camp Meeker Quad
Sonoma County



California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723344_032_HU_Green Valley Creek Roads Implementation Project
T8N, R10W, S25

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Baker's navarretia *Navarretia leucocephala ssp. bakeri*	PDPLM0C0E1			G4T2	S2.1	1B.1
2	Burke's goldfields *Lasthenia burkei*	PDAST5L010	Endangered	Endangered	G1	S1.1	1B.1
3	California linderiella *Linderiella occidentalis*	ICBRA06010			G3	S2S3	
4	Navarro roach *Lavinia symmetricus navarroensis*	AFCJB19023			G5T1T2	S1S2	SC
5	Northern Hardpan Vernal Pool	CTT44110CA			G3	S3.1	
6	Russian River tule perch *Hysterocarpus traski pomo*	AFCQK02011			G5T2	S2	SC
7	Sebastopol meadowfoam *Limnanthes vinculans*	PDLIM02090	Endangered	Endangered	G2	S2.1	1B.1
8	Sonoma sunshine *Blennosperma bakeri*	PDAST1A010	Endangered	Endangered	G1	S1.2	1B.1
9	Vine Hill manzanita *Arctostaphylos densiflora*	PDERI040C0		Endangered	G1	S1.1	1B.1
10	coho salmon - central California coast ESU *Oncorhynchus kisutch*	AFCHA02034	Endangered	Endangered	G4	S2?	
11	dwarf downingia *Downingia pusilla*	PDCAM060C0			G3	S3.1	2.2
12	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
13	great blue heron *Ardea herodias*	ABNGA04010			G5	S4	
14	many-flowered navarretia *Navarretia leucocephala ssp. plieantha*	PDPLM0C0E5	Endangered	Endangered	G4T1	S1.2	1B.2
15	marsh microseris *Microseris paludosa*	PDAST6E0D0			G2	S2.2	1B.2
16	narrow-anthered California brodiaea *Brodiaea californica var. leptandra*	PMLIL0C022			G4?T2T3	S2S3.2	1B.2
17	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
18	osprey *Pandion haliaetus*	ABNKC01010			G5	S3	
19	pallid bat *Antrozous pallidus*	AMACC10010			G5	S3	SC
20	robust monardella *Monardella villosa ssp. globosa*	PDLAM180P7			G5T2	S2.2	1B.2
21	seaside tarplant *Hemizonia congesta ssp. congesta*	PDAST4R065			G5T2T3	S2S3	1B.2
22	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC
23	white-tailed kite *Elanus leucurus*	ABNKC06010			G5	S3	

EXHIBIT A
Dry Creek *Arundo donax* Removal and Riparian Vegetation Enhancement Project
SCOPE OF WORK

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

I Goals Statement

Improve spawning and rearing habitat by reducing fine sediment and improving riparian canopy for Chinook salmon, coho salmon and steelhead trout in a selected section of Dry Creek, a tributary to the Russian River in Sonoma County.

II Objectives Statement

The objective is to eradicate *Arundo donax* from approximately 58 mixed infestation acres of riparian forest along approximately 2.49 miles of stream at four sites. An additional objective is to plant three sites with native riparian vegetation to eventually increase riparian canopy.

III Location Description

Conduct work on Dry Creek from Warm Springs Dam downstream approximately 4 miles. The project is located in Sections 17, 21 and 27 of Township 10 North Range 10 West and Section 3 of Township 9 North Range 10 West Mount Diablo base and meridian, of the 7.5 Minute U.S.G.S. Quadrangle, 122.98028º west, 38.70806º north and 122.96333º west, 38.70222º north and 122.95583º west, 38.68944º north and 122.97861º west, 38.65472º north as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

IV Quantitative Description

Task 1: Prior to treatment each site will be surveyed for sensitive wildlife species, as dictated by CEQA and permit requirements.

Task 2: Populations of Arundo donax will be cut using hand tools and small engine equipment. All biomass will be disposed of on-site by composting, mulching, or burning. All mowed biomass will be staged to eliminate risk of downstream mobilization and reinfestation of Arundo donax by potentially viable parent material. This initial mowing will stress the plant and reduce the foliar area needed for herbicide application, allowing for a more efficient and effective follow-up herbicide treatment. Initial treatment shall occur at all sites within the 1010 work season.

Task 3: Following a suitable period of regrowth, the stressed Arundo donax will be sprayed with an imazapyr herbicide formulation appropriate for aquatic environments. This regrowth will typically be 2-4’ tall, reducing quantities of herbicide during application and decreasing the need for applicators to spray at heights that may damage adjacent native vegetation. For newly removed sites, this task will require 3 years of follow-up herbicide treatment. For previously treated sites, less than 3 years of herbicide treatment may be all that is necessary. Herbicide

treatment at sites that have been previously sprayed will not require additional mowing, as any biomass above ground will be sparse, stunted, and of poor vigor. Herbicide will be sprayed directly on the canes to ensure complete control of these populations.

Task 4: Revegetation with native riparian species will occur where there is a need to ensure slope stability following removal and where there is a low likelihood that nearby native riparian species will recruit naturally.

Task 5: Monitor and Reporting. Methods will include pre-treatment photo documentation, surveying regrowth by revisiting previously treated sites on an annual basis until no regrowth of individual plants is noted, and updating 11 geodatabases. Any slope stabilizing revegetation will be monitored for effectiveness as above.

Task 6: Contract oversight will need to take place over the entire duration of the contract.

V Reporting Metrics

Annual Report

Annually no later than November 1 the Grantee shall submit to the Grantor's Contract Manager one (1) hard copy of a summary written report and one (1) digital, Adobe PDF or Microsoft Word compatible, copy on compact disc.

The Annual Report shall contain all metrics requested in the "All Reports" section listed below. The Annual Report shall contain the results of all work performed to date and address any comments submitted to the Grantee by the Grantor's Contract Manager.

Final Report

Upon completion of the project, the Grantee shall submit one (1) digital copy of a Draft Final Report not later than January 2, 2012 for review and comment. Within 30 days of receipt of the Draft Final Report, the Project Manager shall submit his final comments to the Grantee.

Upon completion of the project, but not later than February 28, 2012, the Grantee shall submit to the Grantor's Contract Manager three (3) hard copies of a final written report and three (3) digital, Adobe PDF or Microsoft Word compatible, copies on compact discs.

The Final Report shall contain all metrics requested in the "All Reports" section listed below. The Final Report shall address all Project Manager comments submitted to the Grantee during the review of the Draft Final Report. The Final Report shall contain the results of the work performed and address any comments submitted to the Grantee by the Grantor's Contract Manager.

The final report shall not be considered final until approved and accepted by the Contract Manager.

All Reports

The reports (annual and final) shall include, but not necessarily be limited to the following information:

-Grant number;
-Project name;
-Geographic area (e.g., watershed name);
-Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map;
-Geospatial reference/location (lat/long with datum is preferred – defined as point, line, or polygon);
-Project start and end dates and the number of person hours expended;
-Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service);
-Expected benefits to anadromous salmonids from the project;
-Labeled before and after photographs of any restoration activities and techniques;
-Specific project access using public and private roads and trails, with landowner name and address;
-Complete as built project description;
-Complete as-built plans and
-Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics

Habitat Projects (All)

-Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority, and list the specific priority task;
-Name the priority habitat limiting factors identified in that plan that are addressed by the project;
-Type of monitoring included in the project:
    -Design spec achieved
    -Fish movement/abundance
-Number of stream miles treated/affected by the project within the project boundaries.
-Overall stream length treated (miles, count one side of the stream only)
-Length of aquatic habitat disturbed (feet)
-Area (footprint) of instream features installed within the bankfull channel (square feet)

Riparian Habitat Projects (HR, HS)

-Number of miles treated (e.g., fenced) according to plan
-Number of acres treated (e.g., planted) according to plan
-Number of acres and type of invasive species controlled
-Species and size of trees planted
-Number of trees/density of plantings
-Feet of stream bank stabilized and treatments used.

-Length of streambank stabilized (miles, count both sides of stream where applicable)
-Length of riparian streambank treated (miles, count both sides of stream where applicable)
-Amount of riparian area treated (acres, including fencing, excluding invasive species treatment)
-Amount of riparian area treated for invasive species (acres)
-Trees planted (number)
-Fence length installed/repaired (miles, actual length of fence)

Riparian Restoration (HR)

a. Miles of stream treated overall (count stream reach only once, even if it has multiple treatments);
b. Miles of riparian stream bank treated (measure both sides of bank, if appropriate);
c. Acres of riparian area treated (total);
d. Acres of riparian area planted;
e. Species scientific name(s) of plants planted;
f. Miles of fence installed/repaired;
g. Number of livestock water gap installations;
h. Acres of riparian area treated for removal of non-native invasive plants; and
i. Species scientific name(s) of plants removed

Water Quality Projects (TW, HR, HU, HS)

- Water quality limitations addressed by the project (e.g., sediment, turbidity, heat, nutrient loading, chemical pollution.
- Water quality limitations addressed by the project (e.g. 303(d), TMDL)

Riparian Habitat Projects (HR, HS)

-Number of miles treated (e.g., fenced) according to plan
-Number of acres treated (e.g., planted) according to plan
-Number of acres and type of invasive species controlled
-Species and size of trees planted
-Number of trees/density of plantings
-Feet of stream bank stabilized and treatments used.
-Length of streambank stabilized (miles, count both sides of stream where applicable)
-Length of riparian streambank treated (miles, count both sides of stream where applicable)
-Amount of riparian area treated (acres, including fencing, excluding invasive species treatment)
-Amount of riparian area treated for invasive species (acres)
-Trees planted (number)
-Fence length installed/repaired (miles, actual length of fence)

Riparian Restoration (HR)

a. Miles of stream treated overall (count stream reach only once, even if it has multiple treatments);
b. Miles of riparian stream bank treated (measure both sides of bank, if appropriate);
c. Acres of riparian area treated (total);
d. Acres of riparian area planted;
e. Species scientific name(s) of plants planted;
f. Miles of fence installed/repaired;
g. Number of livestock water gap installations;
h. Acres of riparian area treated for removal of non-native invasive plants; and
i. Species scientific name(s) of plants removed

VI Regulatory Compliance

All Projects

The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Upper Russian River Exotic Invasives Removal Project.

ALL IMPLEMENTATION PROJECTS

The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured. Obtaining all necessary permits and consultations is the responsibility of the Grantee.

ALL PROJECTS WITH PLANTING COMPONENT

Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings.

The standard for success is 80% survival of plantings, after a period of three years.

ALL PROJECTS WITH INSTREAM COMPONENT HS HI CF PM HB HU FL SC

All habitat improvements will follow techniques described in the Third Edition, January 1998, of the California Salmonid Stream Habitat Restoration Manual, Flosi et al. and the California Salmonid Stream Restoration Manual, Third Edition, Volume II, Part XI, January 2004.

Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game.

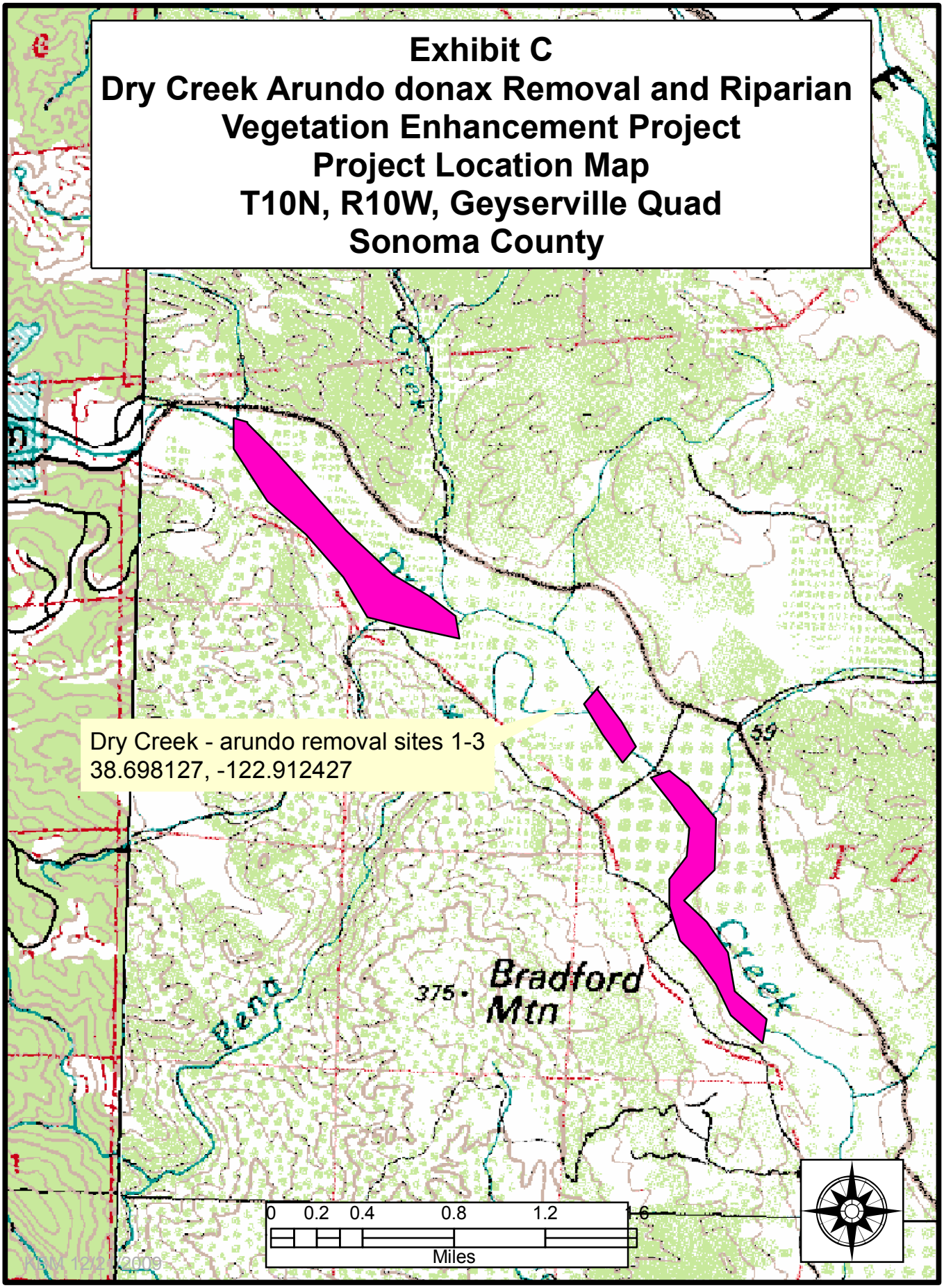
The Grantee shall notify the Grant Manager a minimum of five working days before any fish bearing stream reaches are dewatered and the stream flow diverted.

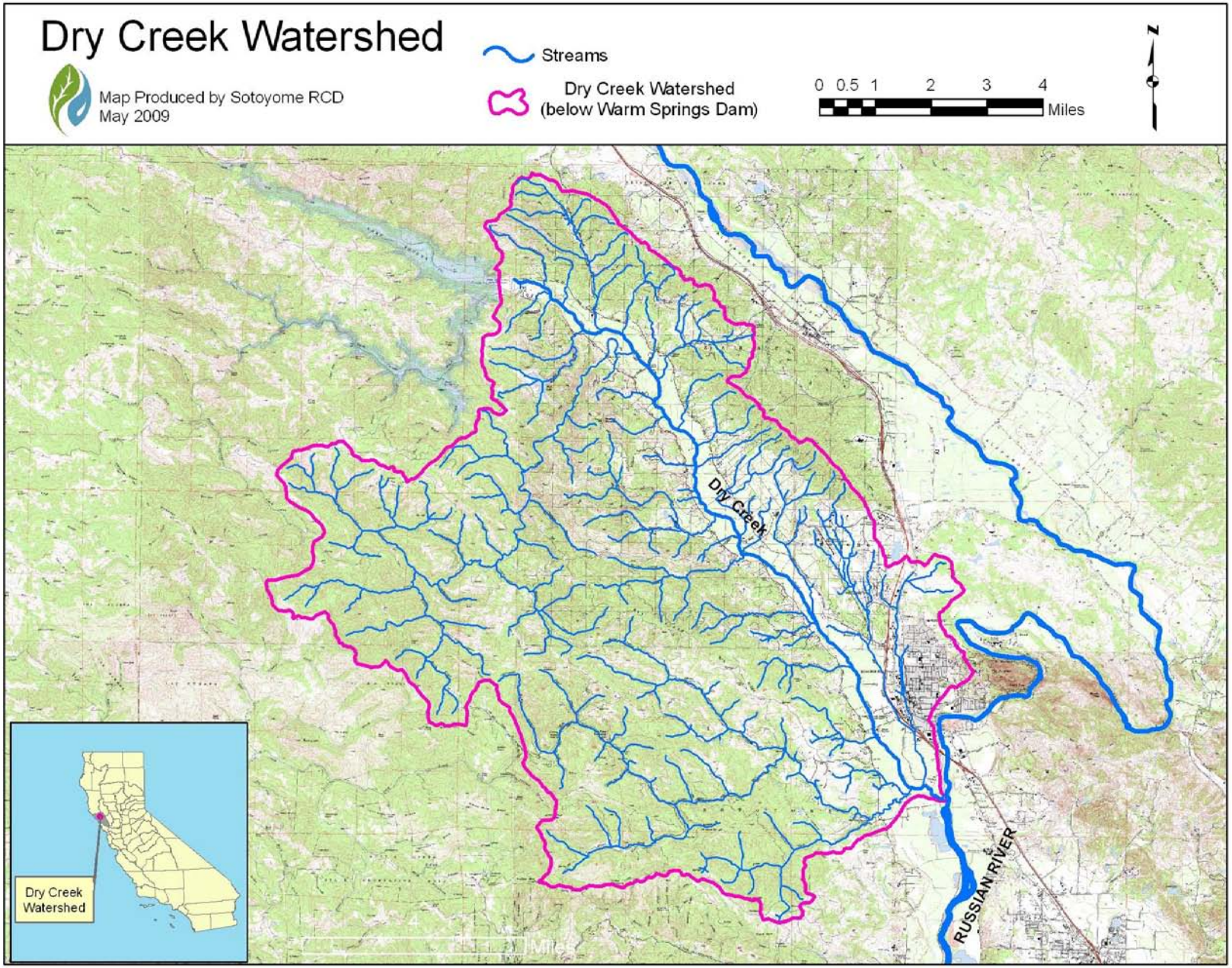
The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area.

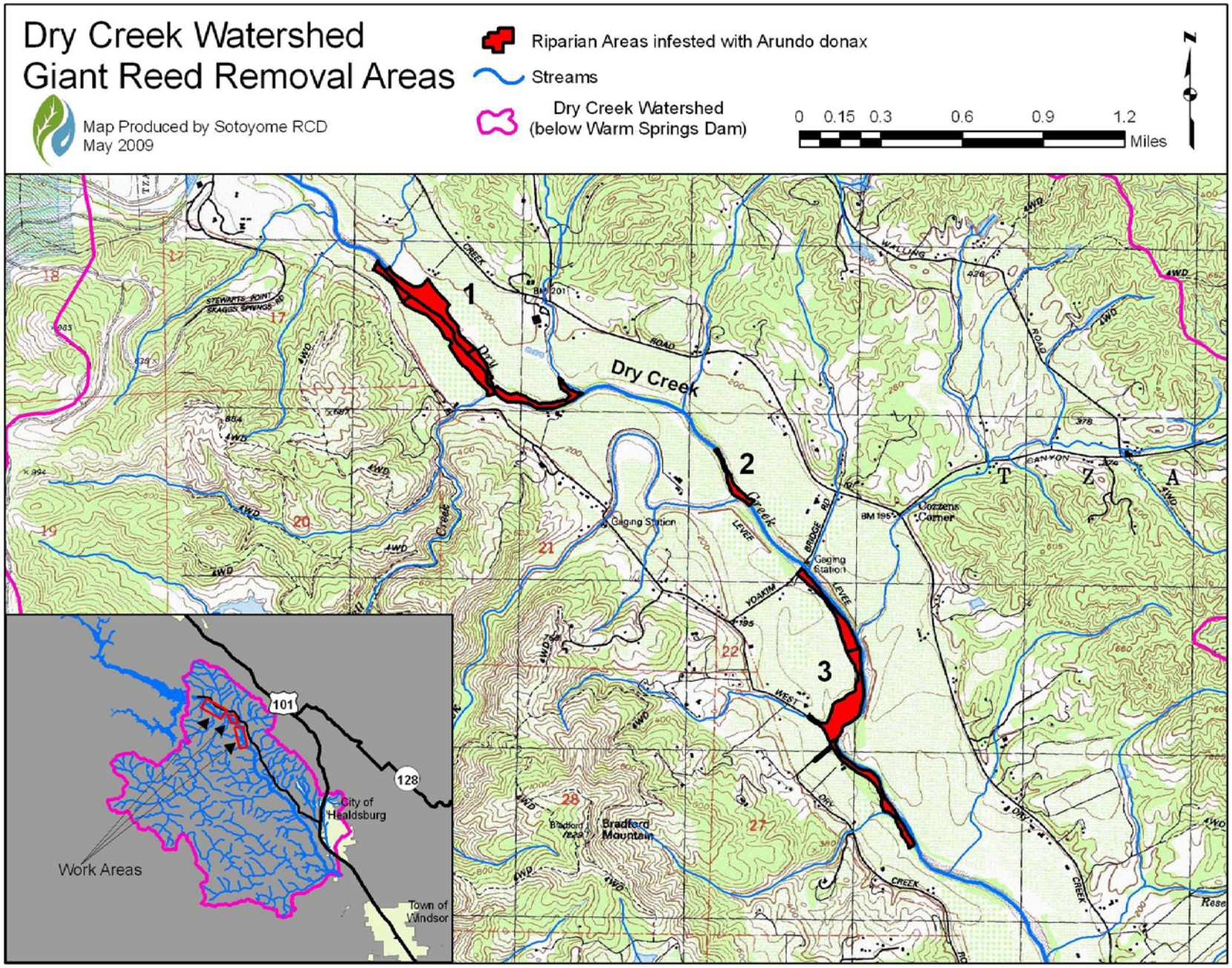
If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

- Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
- The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
- All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), *Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act*, June 2000.
- The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game, unless the relocation work is performed by DFG personnel.
- Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual.*

Exhibit C
Dry Creek Arundo donax Removal and Riparian Vegetation Enhancement Project
Project Location Map
T10N, R10W, Geyserville Quad
Sonoma County




Dry Creek Watershed
Map Produced by Sotoyome RCD
May 2009
Streams
Dry Creek Watershed
(below Warm Springs Dam)
0 0.5 1 2 3 4
Miles
N
Dry Creek
RUSSIAN RIVER
Dry Creek
Watershed


Dry Creek Watershed
Giant Reed Removal Areas
Map Produced by Sotoyome RCD
May 2009
Riparian Areas infested with Arundo donax
Streams
Dry Creek Watershed
(below Warm Springs Dam)
0 0.15 0.3 0.6 0.9 1.2
Miles
N
1
2
3
Dry Creek
Gaging Station
Oozzens Corner
Bradford Mountain
Work Areas
City of Healdsburg
Town of Windsor
101
128

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723432_119_HR_Dry Creek Arundo donax Removal and Riparian Vegetation Enhancement Project
T10N, R10W, S17; T10N, R10W, S21; T10N, R10W, S27; T9N, R10W, S3

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Brandegee's eriastrum *Eriastrum brandegeeae*	PDPLM03020			G3	S3.2	1B.2
2	California freshwater shrimp *Syncaris pacifica*	ICMAL27010	Endangered	Endangered	G1	S1	
3	California red-legged frog *Rana draytonii*	AAABH01022	Threatened		G4T2T3	S2S3	SC
4	Clear Lake Drainage Resident Trout Stream	CARA2520CA			G?	SNR	
5	Cobb Mountain lupine *Lupinus sericatus*	PDFAB2B3J0			G2	S2.2	1B.2
6	Colusa layia *Layia septentrionalis*	PDAST5N0F0			G2	S2.2	1B.2
7	Geysers dichanthelium *Dichanthelium lanuginosum var. thermale*	PMPOA24028		Endangered	G5T1Q	S1.1	1B.1
8	Konocti manzanita *Arctostaphylos manzanita ssp. elegans*	PDERI04271			G5T2	S2.3	1B.3
9	Morrison's jewel-flower *Streptanthus morrisonii*	PDBRA2G0S0			G2	S2	
10	Rincon Ridge ceanothus *Ceanothus confusus*	PDRHA04220			G2	S2.2	1B.1
11	Snow Mountain buckwheat *Eriogonum nervulosum*	PDPGN08440			G2	S2.2	1B.2
12	Socrates Mine jewel-flower *Streptanthus brachiatus ssp. brachiatus*	PDBRA2G072			G2T1	S1.2	1B.2
13	Sonoma canescent manzanita *Arctostaphylos canescens ssp. sonomensis*	PDERI04066			G3G4T2	S2.1	1B.2
14	few-flowered navarretia *Navarretia leucocephala ssp. pauciflora*	PDPLM0C0E4	Endangered	Threatened	G4T1	S1.1	1B.1
15	foothill yellow-legged frog *Rana boylii*	AAABH01050			G3	S2S3	SC
16	glandular western flax *Hesperolinon adenophyllum*	PDLIN01010			G2	S2.3	1B.2
17	marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	PDMAL110K2			G5T2?	S2?	1B.2
18	purple martin *Progne subis*	ABPAU01010			G5	S3	SC
19	serpentine cryptantha *Cryptantha clevelandii var. dissita*	PDBOR0A0H2			G5T1	S1.1	1B.1
20	steelhead - central California coast ESU *Oncorhynchus mykiss irideus*	AFCHA0209G	Threatened		G5T2Q	S2	

The Grantor's Project Manager is**:** Gail Seymour, CA Department of Fish and Game, Bay Delta Region, P.O. Box 47, Yountville, CA 94599, 707- 944-5579; fax: 707- 944-5563; email: gseymour@dfg.ca.gov

The Grantee's Project Manager is: Mark Newhouser, Sonoma Ecology Center, P.O. Box 1486, Eldridge, CA 95431, 707-996-0712 ext 103; fax: 707-996-2452; email: mnewhouser@sonomaecologycenter.org

Grant term: March 2010 – June 2012

EXHIBIT A
Riparian Restoration for Salmonid Recovery, Sonoma Creek (Phase II)
SCOPE OF WORK

Under direction of the Grantor, and under the following conditions and terms, the Grantee will:

I. Goals Statement

The goal of this project is to enhance the quality of some of the best spawning and rearing habitat for native steelhead in the San Francisco Bay Estuary. Implementation will consist of restoring degraded riparian habitat on Sonoma Creek between the towns of Glen Ellen and Kenwood. Objectives include restoring patters of riparian succession, reducing primary sediment sources, and improving water temperatures, bank stability, pool complexity and shelter for steelhead trout in a selected section of Sonoma Creek tributary to San Pablo Bay in Sonoma County.

II. Objectives Statement

The objective is to restore the native riparian corridor along 7.5 miles of stream, remove invasive species including periwinkle (*Vinca major*), English ivy (*Hedera helix*), Himalayan blackberry (*Rubus discolor*), hemlock (*Conium maculate*), wild radish (*Raphanus raphanistrum*), mustard (*Brassica sp*.), fennel (*Foeniculum vulgare*), smilograss (*Piptatherum miliaceum*) silver lace vine (*Polygonum aubertii*), and cape ivy (*Delairea odorata)* from ten sites and plant 2,600 native riparian plant species to immediately reduce bank erosion and eventually increase riparian canopy.

III. Location Description

Conduct work on Sonoma Creek approximately 7 – 15 miles upstream from the confluence of San Pablo Bay. The project is located in Township 6N, Range 6W, Section 16 of the Glen Ellen quad 7.5 Minute U.S.G.S. Quadrangle, 38º 22’ 07” N, 122º 31’ 14” W as depicted in Exhibit C, Project Location Map, which is attached and made part of this agreement by this reference.

IV. Quantitative Description

The Grantee will plant a minimum of 2,600 native plants, 75' of willow wall revetment, stabilization of 5,100 linear feet of stream bank, and five acres of habitat restored. The plants shall include but will not be limited to, bigleaf maple (*Acer Macrophyllum*), Oregon ash (*Faxinus latifolia*), coast live oak (*Quercus agrifolia*), buckeye (*Aesculus californica*), bay laurel (*Umbellaria californica*), mugwork (*artemesia douglasiana),* spicebush (*Calycanthus occidentali)s,* California Rose (*Rosa californica*), snowberry (*Symphoricarpus albus*), ceonothus "Julia Phelps" (*Ceonothus sp.),* Douglas iris (*Iris Douglasiana*), California poppy (*Eschscholzia californica*), Santa Barbara sedge (*Carex barbarae*), Native grass seed mix: brome, creeping wild rye, multi-seed grass, fescue (*Bromus carinatus, Leymus triticoides, Elymus multisetus, Festuca californica).*

SCOPE OF WORK

1. The current reach-based restoration plan will be amended and expanded in concert with landowners and permitting agencies using Chapters VII, VIII, and XI of the DFG California Salmonid Stream Habitat Restoration Manual (Flosi et al. 1998).

2. Engage 10 private property owners and many more indirectly through the involvement of the neighborhood Stream Steward groups. Reach based restoration plans will be developed considering local management opportunities and constraints. Technical training to empower landowners to maintain projects will be conducted.

3. Weed Eradication: The restoration specialist will ID native vegetation and cage or tag smaller plants to reduce harm before any weed eradication activities are conducted. Desirable plants will be protected from overspray or mechanical damage by tarping and/or other avoidance techniques. Herbicide treatments will be done in accordance with DFG regulations by a licensed applicator. Weed eradication methods recommended by the California Invasive Plant Council (Cal-IPC) will be followed for each invasive species.

4. Native Plant Revegetation: Plants needed for revegetation will have been propogated by the Sonoma Ecology Center at the Sonoma Garden Park Native Plant Nursery. Propagule sources have been collected from the project site or within the Sonoma Creek watershed. Plants will be plated in late fall and early winter when soil moisture has reached a depth of eight inches. Plant locations will initially be identified with colored flags with six-letter species codes. Holes will be hand dug equal to twice the width and to the depth of the root ball of each plant. Holes will be filled, tamping down the soil to remove air pockets, and watered immediately. Woody specimens will be mulched to suppress weeds and hold moisture. Trees an shrubs installed in areas above the floodplain will be protected with plastic cages where herbivore predation may be an issue. Plant protection will not be used where floodwaters may affect them.

5. Irrigation: Irrigation will occur from approximately May through September using either drip irrigation, hand watering techniques or a sprinkler system. Landowners will be responsible for supplying water and the cost of irrigation installation.

6. Two willow wall revetments, totaling approximately 75 feet in length will be installed by CCC crews in the early winter using dormant, locally collected willow. The willow wall revetments will be irrigated and maintained by SEC and/or landowners.

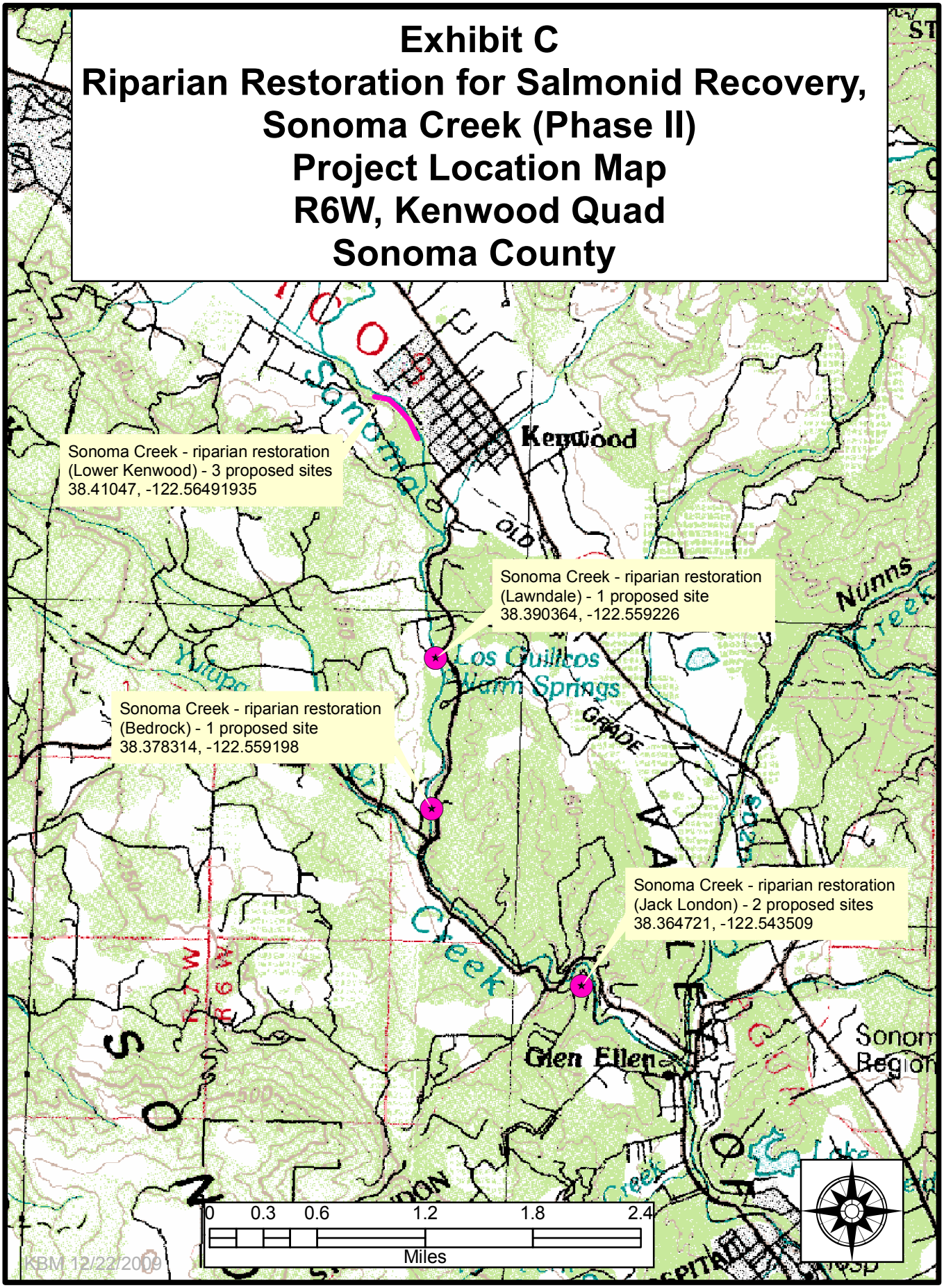
7. Maintenance: Yearly maintenance will include removing weeds within a minum of a three foot diameter around planted trees and shrubs and replacing dead plants Revegetated areas will be monitored for plant mortality in August and dead plants will be replaced that winter. Replacement will continue through the end of the project period.

8. Monitoring: Photo monitoring stations will be set up prior to revegetation and weed removal. Photo point locations will be chosed to capture the majority of each area. Permanent benchmarks recorded with GPS points will be placed in the field at each point. Compass bearing will also be recorded in the direction of each photograph. Each photo will be taken with a label IDing the project sige, date, benchmark numbe, and compass bearing. Photo monitoring will take place on a seasonal basis for the project period and beyond, as funding allows. After each treatment, Sonoma Ecology Center staff will record the treatment area and attribute information using "Geoweed". Attribute information includes percent cover of native and non-native species in the overstory and understory, size, density, and location of treatment area.

9. The Grantee shall notify the DFG Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for DFG personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:

    - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
    - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
    - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service (NMFS), Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act, June 2000.
    - The Grantee will provide fish relocation data to the DFG Grant Manager on a form provided by the DFG, unless the relocation work is performed by DFG personnel.
    - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the California Salmonid Stream Habitat Restoration Manual.

Exhibit C
Riparian Restoration for Salmonid Recovery, Sonoma Creek (Phase II)
Project Location Map
R6W, Kenwood Quad
Sonoma County



KBM 12/22/2009

California Department of Fish and Game
Natural Diversity Database
Selected Elements by Common Name - Portrait
723485_172_HR_Riparian Restoration for Salmonid Recovery, Sonoma Creek (Phase II)
M06.0n06.0W16

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1	Baker's navarretia *Navarretia leucocephala ssp. bakeri*	PDPLM0C0E1			G4T2	S2.1	1B.1
2	California red-legged frog *Rana draytonii*	AAABH01022	Threatened		G4T2T3	S2S3	SC
3	Calistoga ceanothus *Ceanothus divergens*	PDRHA04240			G2	S2.2	1B.2
4	Clara Hunt's milk-vetch *Astragalus claranus*	PDFAB0F240	Endangered	Threatened	G1	S1.1	1B.1
5	Cobb Mountain lupine *Lupinus sericatus*	PDFAB2B3J0			G2	S2.2	1B.2
6	Colusa layia *Layia septentrionalis*	PDAST5N0F0			G2	S2.2	1B.2
7	Greene's narrow-leaved daisy *Erigeron greenei*	PDAST3M5G0			G2	S2	1B.2
8	Jepson's leptosiphon *Leptosiphon jepsonii*	PDPLM09140			G2	S2.2	1B.2
9	Napa bluecurls *Trichostema ruygtii*	PDLAM220H0			G2	S2	1B.2
10	Napa false indigo *Amorpha californica var. napensis*	PDFAB08012			G4T2	S2.2	1B.2
11	Napa western flax *Hesperolinon sp. nov. "serpentinum"*	PDLIN010D0			G2	S2.1	1B.1
12	Northern Vernal Pool	CTT44100CA			G2	S2.1	
13	Sonoma beardtongue *Penstemon newberryi var. sonomensis*	PDSCR1L483			G4T1	S1.3	1B.3
14	Townsend's big-eared bat *Corynorhinus townsendii*	AMACC08010			G4	S2S3	SC
15	bald eagle *Haliaeetus leucocephalus*	ABNKC10010	Delisted	Endangered	G5	S2	
16	green jewel-flower *Streptanthus breweri var. hesperidis*	PDBRA2G092			G5T2	S2.2	1B.2
17	holly-leaved ceanothus *Ceanothus purpureus*	PDRHA04160			G2	S2.2	1B.2
18	marsh checkerbloom *Sidalcea oregana ssp. hydrophila*	PDMAL110K2			G5T2?	S2?	1B.2
19	narrow-anthered California brodiaea *Brodiaea californica var. leptandra*	PMLIL0C022			G4?T2T3	S2S3.2	1B.2
20	northern spotted owl *Strix occidentalis caurina*	ABNSB12011	Threatened		G3T3	S2S3	SC
21	pallid bat *Antrozous pallidus*	AMACC10010			G5	S3	SC
22	purple martin *Progne subis*	ABPAU01010			G5	S3	SC
23	steelhead - central California coast ESU *Oncorhynchus mykiss irideus*	AFCHA0209G	Threatened		G5T2Q	S2	

	Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24	two-carpellate western flax *Hesperolinon bicarpellatum*	PDLIN01020			G2	S2.2	1B.2
25	western pond turtle *Actinemys marmorata*	ARAAD02030			G3G4	S3	SC